

### **REMARKS**

After entry of this Amendment, claims 1 and 3-24 are pending in this application, of which claims 23 and 24 have been withdrawn. Claims 1 and 3-22 stand rejected. Claims 1 and 3 have been amended. In view of the amendments to the claims and the remarks below, Applicants respectfully request that the rejections be withdrawn and that the claims be allowed.

The drawings stand objected to for failing to show every feature of the invention specified in the claims. Specifically, the Office Action states that the drawings must be amended to show the “side-walls” recited in claim 1. In response, Applicants respectfully point out that reference numbers 89 and 91 refer to the recited side-walls. “The side walls of the trench 89 and 91 may be used to provide a barrier to electromigration as described with reference to FIGS. 7 to 9.” Application, ¶ [0086]. Reference numbers 89 and 91 are illustrated in Figure 11E. Accordingly, Applicants submit that the claimed features are shown in the figures. Applicants respectfully request that the objection be withdrawn.

Claim 3 stands objected to for informalities. Applicants have amended claim 3 in accordance with the Examiner’s suggestion. Accordingly, Applicants respectfully request that the objection be withdrawn and that the claim be allowed.

Claims 1 and 3-22 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, claim 1 recites language found in the Office Action to be indefinite. Applicants have amended claim 1 in accordance with the Examiner’s suggestion. Applicants now believe that claim 1 is allowable. Claims 3-22 depend from claim 1 and are allowable for at least the same reasons that claim 1 is allowable. Accordingly, Applicants respectfully request that the rejection be withdrawn and that the claims be allowed.

Claims 1, 3-5, 7-10, 14-18 and 20-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,696,648 to Slayman et al. (“Slayman”). The rejection is traversed.

Claim 1 has been amended to recite an antenna that includes a photoconductive material and a plurality of spaced apart electrodes provided on the photoconductive material. Each electrode has “at least one facing edge which faces a facing edge of an adjacent electrode.” A physical barrier is provided “abutting a facing edge of at least one electrode, said barrier extending to at least the full height of said facing edge.” The “facing edge of the at least one electrode is provided within a recess of the surface of said layer of photoconductive material such that said barrier is formed from said layer of photoconductive material, said recess including side-walls formed from said photoconductive material.” One of the side-walls of the recess is the recited barrier. As explained below, Slayman fails to disclose each of the elements and limitations of amended claim 1. Specifically, Slayman fails to disclose that the “facing edge of the at least one electrode is provided within a recess of the surface of said layer of photoconductive material such that said barrier is formed from said layer of photoconductive material, said recess including side-walls formed from said photoconductive material, one of said side-walls of said recess providing said barrier.”

Slayman discloses a two-terminal photoconductor that includes two conducting electrodes separated by a photosensitive barrier or semiconductor material. Slayman, col. 1, l. 65-col. 2, l. 1. The Slayman device includes an active layer 14 and “a pair of interdigitated electrically conducting electrodes 16, 18 formed on a portion of the surface of the active layer.” Slayman, col. 2, ll. 21-27. The photosensitive barrier or semiconductor material is composed of “a passivation layer 20 of semiconductor material having a bandgap greater than that of the semiconductor material comprising the active layer and formed on at least portions of the active layer exposed by the interdigitated electrodes.” Slayman, col. 2, ll. 28-32. Thus, Slayman does not disclose that the barrier is formed of the same material layer that the electrodes are formed on. Specifically, Slayman discloses that the electrodes are formed on an active layer 14 and that the barrier between the electrodes is formed of a different passivation layer 20. The passivation layer is separate from and has different properties than the active layer 14 on which the electrodes 16, 18 are formed. Claim 1 recites that the barrier is formed from “said layer of photoconductive material.” Therefore, claim 1 is allowable over Slayman. Claims 3-5, 7-10, 14-18 and 20-22 depend from claim 1 and are

thus allowable over Slayman for at least the same reasons that claim 1 is allowable. Accordingly, Applicants respectfully request that the rejection be withdrawn and the claims be allowed.

Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Slayman. The rejection is respectfully traversed.

Claims 11-13 depend from claim 1. Because, as explained below, Slayman fails to teach each element and limitation of claim 1, claims 11-13 are allowable over Slayman for at least the same reasons that claim 1 is allowable over Slayman. Accordingly, Applicants respectfully request that the rejection be withdrawn and that claims 11-13 be allowed.

Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Slayman in view of Japanese Patent No. 11-243217 to Yamamoto et al. ("Yamamoto"). The rejection is traversed.

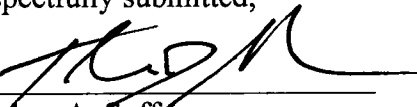
Claim 19 depends from claim 1. As explained above, Slayman fails to teach each element and limitation of claim 1. Specifically, Slayman fails to teach that the recited barrier is of the same material layer as the recited photoconductive layer. Thus, for at least these reasons, Slayman fails to teach each element and limitation of claim 19. Yamamoto, relied upon in the Office Action to teach the application of a bias between facing edges of adjacent electrodes, fails to remedy the inadequacies of Slayman. *See* Office Action, p. 7. Accordingly, claim 19 is allowable over the combination of Slayman and Yamamoto. Applicants respectfully request that the rejection be withdrawn and that the claim be allowed.

Claim 6 is indicated in the Office Action to contain allowable subject matter, and would be allowable if rewritten to overcome the pending § 112, second paragraph rejections and to include all the limitations of the base claim and any intervening claims. Applicants are grateful for the Examiner's finding of allowable subject matter in claim 6. However, as explained above, Applicants believe that claim 1, from which claim 6 depends, is allowable. Therefore, claim 6 is also allowable for at least the same reasons that claim 1 is allowable.

In view of the above amendment, Applicants believe the pending application is in condition for allowance. If there are any additional charges in connection with this filing or any subsequent filings (including but not limited to issue fees), the Examiner is respectfully requested and authorized to charge Deposit Account No. 04-1073 therefor under Order No. M0025.03250/P320.

Dated: May 18, 2009

Respectfully submitted,

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